

by. We found a nest of four hard-set eggs on April 8th, and others containing young birds a fortnight later.

40. *ASIO OTUS* (L.). Long-eared Owl.

We shot one specimen on the mountains of Macedonia, and afterwards found the species breeding on a low island in the Danube, covered with a dense thicket of willows. The young were three parts grown on the 1st of May; so that nidification must have been begun before the ice broke up on the river.

41. *ASIO BRACHYOTUS* (L.). Short-eared Owl.

Breeds commonly in the Dobrudscha, where we obtained one or two nests, but did not find it anywhere else.

42. *SYRNIUM ALUCO* (L.). Tawny Owl.

This cannot be a common species, as we never saw or heard it; but Mr. Robson has obtained it more than once. In his collection was a perfectly black Owl which no doubt was a melanite variety of this species.

43. *STRIX FLAMMEA*, L. Barn-Owl.

Not observed by us, but included in Lord Lilford's list.

44. *NYCTEA TENGMALMI* (Gmel.). Tengmalm's Owl.

Said to have once occurred at Corfu (Ibis, 1860, p. 133).

[To be continued.]

V.—*On the Ornithology of Hainan.*

By ROBERT SWINHOE, F.Z.S. &c.

(Plate IV.)

AFTER my successful researches in the island of Formosa*, I was determined, should an opportunity offer itself, to pay a visit to the island of Hainan. The opportunity came in the spring of 1868, when Her Majesty's Minister at Peking, being desirous to obtain information on the commercial capabilities of that island, with a view to opening a port in it for European trade, gave me instructions to repair thither in a gunboat to prosecute inquiries, the whole cruise not to extend over two

* Cf. Ibis, 1860, pp. 186, 187, 359-361; 1863, pp. 198-219, 250-311, 377-435; 1864, pp. 361-370, 425-429.

months and a half. Apart from the investigations on behalf of the Government, I gained the Minister's permission to devote my leisure time during the trip to the study of the natural productions of the new country. Admiral Keppel detached the gunboat 'Algerine,' Lieutenant and Commander Domville, for the duty; and Captain Holroyd, of H.M.'s 73rd regiment, accompanying us as the guest of the Commander, made a third to our party. In all our pleasure-trips on shore, Commander Domville and Captain Holroyd always carried guns, and thus aided me considerably in procuring specimens of birds; and to them I owe my best thanks in the cause of science. The Admiral insisted upon our associating the pursuit of pirates with our more peaceful occupation of hunting for information; and this, though sometimes producing serious drawbacks to getting quiet conversation with the natives, yet afforded a diversion to the monotony of a sea voyage.

From any tolerable map of China my readers may learn where Hainan is situated, if they turn their eyes westward from Hongkong along the coast of the province of Kwangtung to where a peninsula runs southwards, dividing the China Sea from the Gulf of Tonquin. This is the peninsula of Luichow; and directly south of this, across a strait fifteen miles in width, stretches the large island of Hainan, covering two degrees of latitude ($20^{\circ} 8'$ to $17^{\circ} 52' N$), and over two and a half degrees of longitude ($108^{\circ} 32'$ to $111^{\circ} 15' E$). The island is of a somewhat oval shape, extends from north-east to south-west (its greatest length) about 160 miles, and has an average breadth of nearly 90 miles. Its area is about 1200 square miles, rather larger than the island of Formosa, and about two-thirds the size of Sicily. About a third of its north-eastern portion, together with broad tracts on its north-western and south-western sides, are flat, or gently undulating, with only a few eminences, the soil being composed of marine deposit, and poor in quality. The rest of the country consists of jungle-covered mountains, with rich valleys between them. The north-easterly portion is exposed to the influence of the winter monsoon, and enjoys cool weather during the China cold season, while the mountains of the interior, rising to an altitude of 7000 feet, debar the south

from the refreshing north-easters, and render it entirely tropical, and, according to the Chinese, very pestilential. In Hainan the visitor from China is specially struck with the abundance of the cocoanut tree (a tree not found in the latitude of Canton), which meets the eye on all points of the island coast. In spite of the winter monsoon, it flourishes best in the north-east corner of Hainan, in the district of Wênchang. Further in the interior, as the ground rises, the pine (*Pinus sinensis*) appears, and in some spots I noticed clumps of pine and topes of cocoanut growing side by side. We found the cocoanut also growing on the opposite shore of the Luichow peninsula, and on the small island of Naochow, off the right of the peninsula, in lat. $20^{\circ} 45'$. Higher than this we did not notice it. The mountainous interior of Hainan is inhabited by an independent race of people, who are called La, Lauy, or Le, according to dialectic difference of pronunciation in Chinese; and they are doubtless intimately connected with the Laos of Siam and Burmah and the Lolos of China.

We left Hongkong on the 29th January 1868, and anchored in the harbour of Hoeling island, in the Prefecture of Shao-king, at daylight on the 31st. The only birds I noticed here were *Passer montanus*, *Ixus sinensis*, *Turtur chinensis*, *Sterna melanauchen*, and a Kite.

Having engaged a pilot, we were away again next morning, and by the evening in the strait between Naochow island and Luichow peninsula, where the gunboat took the ground. This little accident gave us the whole of the following day for exploring Naochow. The land here is low and undulating, dotted with villages and farms in the midst of bamboos and banyans. The cocoanut tree is chiefly confined to the north-west corner of the island. The most notable bird we saw here was the Crane (*Grus cinerea*), which occurred in large flocks, and baffled all our attempts at close approach. The first bird I noticed and shot on landing was a race of the *Ixus sinensis*, with the whole crown black and no occipital white. We saw and procured several of these, but not one of the true Chinese bird. The next bird we secured was a veritable example of the European *Corvus corone*. There were two together, and we bagged

one of them. In Hainan, as will be seen further on, the ordinary big-billed black Crow, found from Canton to Peking—the *Corvus sinensis* of Gould—is the common species, and in the cities almost as familiar and domestic as the Sparrow. I am not aware that the European Corby has occurred in this part of the world before. The other birds we observed in our day's ramble were as follows :—*Gallinago scolopacina*, *Rhynchæa sinensis*, *Ardeola prasinoscelsis*, *Egretta alba*, *Passer montanus*, *Turtur chinensis*, *T. humilis*, *T. gelastes*, *Ruticilla aureora*, *Pratincola indica*, *Lanius schach*, *Copsychus saularis*, *Orthotomus phyllorhaphæus*, *Reguloides superciliosus*, *R. proregulus*, *Zosterops simplex*, *Emberiza personata*, *Anthus richardi*, *Motacilla luzonensis*, *Pica sericea*, *Corvus torquatus*, *Halcyon pileatus*, *Acridotheres cristatellus*, *Buteo japonicus*, *Tinnunculus alaudarius*, a species of *Eudynamis*, and only one Kite.

On the 3rd of February, at daylight, we weighed, and anchored in the afternoon in the open harbour of Hoihow, the port of the city of Kiungchow, the capital of Hainan. Through the kindness of Messrs. D. B. Robertson and F. W. Mayers, Her Majesty's Consul and Vice-Consul at Canton, I had been provided with letters from the Viceroy of Kwangtung, recommending me to the care and attention of the Governor, the Prefect, and the military commanders of Hainan. These officers received us well, and exerted themselves to assist us in the objects of our expedition. Commander Domville was "death on" pirates; and news having arrived that pirate junks had been seen hovering about the neighbourhood, the Captain of Hoihow hired junks and arranged a joint cruise with the gunboat in chase of them. This gave me a chance of having a quiet trip into the interior; and on the 6th of February I left the gunboat just as she was starting, and put up for the night at the house of a Canton merchant. On the 7th I rode to the city of Kiungchow, about two miles and a half distant from Hoihow, and took up my quarters in a public office provided for me by the Taotai or Governor. The next seven days I spent in official duties, in rambling about the city and its neighbourhood, and in paying a visit to a French Roman-Catholic priest, who lived in Chinese style and costume, in a small village about ten miles

distant from the city. On the 14th, having induced the Governor to send a military officer with me, I started on a trip to the mountains. We embarked close to the city in a flat-bottomed boat with our chairs and bearers, and pushed up the river to Kewchow, where we landed, and travelled across country to Shuy-wei-sze, a trading-station between spurs of the mountain chain. From Shuy-wei-sze we made for Tai-ping-sze, right among the mountains, in the district of Ting-gan. This was a wonderful place for forest-birds, abounding in lofty trees, clear of jungle and undergrowth. From this I pushed up to Ling-mun (or "Gate of the Mountains"), a place of barter between the Chinese and the independent tribes; but here most of the timber had been cut away, and I found it of less interest for natural-history purposes than the woody spots on a lower level. The Lieutenant commanding at Tai-ping-sze accompanied me to Ling-mun and back. He was most assiduous in his attentions, following me about in my rambles among the woods with hot tea, cakes, and pipe, and a stool to sit upon! As the weather was fearfully hot in this mountain-locked neighbourhood, the mandarin's attentions were thankfully received. The authorities at both Shuy-wei-sze and Tai-ping-sze had received orders from the Taotai to receive me well; and on my arrival at each place the police were drawn up in double line at the entrance to the town, supported by large crowds of the people, and, as I was carried through in my travelling chair to the temple appointed for my reception, the police fell on one knee, a salute of three guns was fired, and the mandarins, in their ornamented official robes, presented themselves to welcome me in a travel-stained shooting turn-out with a gun on my shoulder. Their first idea of a British official must have been a strange one; but when I explained to them that I was as much interested in the wild animals of the island as in any other of its products, they did their best to aid me, though they never ceased to regard me as a queer customer, and could not to the last understand why I should trouble myself about birds and beasts, and to what use I could turn their skins. I am afraid they looked upon me as slightly wrong in the head. Nevertheless they did not cease their attentions, and gave me what information I sought. The

Lieutenant of Shuy-wei-sze did not leave me till he had handed me over to the authorities at Tai-ping-sze; and the fat good-natured Lieutenant of this last place clung to me till I returned to Kiungchow-foo in safety. On my return from the hills, I passed over a bleak plain to the city of Ting-gan. It was blowing cold from the north-east, drizzling with rain, and I was carried into the city in a benumbed state, so great was the change from the heat among the mountains during the previous few days. The chief authority or magistrate at the city of Ting-gan received me into his own house, and I spent a very pleasant evening with him and his secretary and literary friends. Next morning he provided me with a boat, and I returned to the capital, arriving there on the 1st March, my cruise in the interior having occupied a fortnight.

The gunboat was at anchor in Hoihow harbour; and we got away on the 4th March, and anchored outside the Poochin river the same evening. On the 6th we entered the Chinlan river on the west, in the Wênchang district, where we explored till the 8th. We then left and sailed down the coast. On the 9th, near the shore opposite Tychow island, the gunboat captured and burned a pirate junk, whose crew fired and threw overboard her guns and escaped to land. On the 10th we anchored off Lingshuy harbour, and spent a pleasant time in its neighbourhood till the afternoon of the 12th. We were informed that pirates were in watch for junks outside the harbour, and, creeping out, we sighted two of their vessels and gave chase. The pirates now tried to escape in a boat, but they were all, thirty-three in number, taken prisoners. The gunboat anchored with her captives in Yu-lin-kan bay. The shore here is mountainous, jungly, and inhabited by Le men, and the heat was great. We rambled about in this neighbourhood till the 14th, when we left at noon, and anchored at 4 P.M. under West Island. We had a morning stroll the next day over this pretty little island, colonized by Chinese fishermen, and lying about three miles from the wild-looking land opposite. The flat portion of the island was grassy in places, and in places planted with cotton, and protected from the winds by hedges of plants and trees. The hilly portion was covered with wood.

The birds observed here were *Alauda cœlix*, *Anthus cervinus*, *Pipastes agilis*, *Heterornis sinensis*, *Centropus affinis*, *Turtur chinensis*, besides a new *Ixus* and a new *Arachnecthra*. On the pebbles of the beach we procured a solitary Grey-headed Wag-tail, *Budytes cinereocapillus*. I further noticed an Osprey, a Sea-Eagle, a Kestrel, and a Marsh-Harrier. The gunboat moved at noon, and at 4 P.M. anchored in the outer harbour of Nychow, and next morning the pirates were handed over to the authorities. We spent from the 15th to the 19th March in this glorious tropical region, visiting, feasting, and exploring, and on the 20th began again to steer northwards, passing along the west coast of Hainan. The 21st we spent at Tuntow, on the borders of the Kangên and Changhwa districts, part of the 22nd and the 23rd at Hoitow in Tanchow district, the 25th to 27th at Heongpoo, also in the Tanchow district, losing two days here on account of rainy and stormy weather. March 29th we explored at Haosuy in the Linkao district, and March 30th about Hungpe harbour, in the district of Chingmai. On the 31st, we were back again at Hoihow, whence, after exchanging civilities with the authorities, and finishing the details of our inquiries, we steered across, on the morning of the 3rd of April, to the mainland opposite—the peninsula of Luichow, and had a run on shore. The land beyond the beach is somewhat raised, and hedges and trees shelter the rice-fields behind. Here, to my astonishment, I found *Ixus sinensis*, the common Bulbul; but among them occasionally occurred the black-capped species of Hainan and Naochow. I also noted *Gallinula phœnicura*, *Prinia sonitans*, and *Phylloscopus fuscatus*. Along the beach southwards I shot a *Lobipes hyperboreus* as he sat floating about in a pool. Along the banks of a small creek that enters from the sea, we saw large numbers of *Totanus glottis* and *Hiaticula cantiana*, and a flight of Wagtails (*Motacilla ocularis*) settling for the night among the sands. The dirty weather compelled us to anchor again under Naochow island on the 5th of April, and, in spite of the wind and drizzle, I got a long stroll with my gun. We had already met the summer birds passing up the western coast of Hainan; but Naochow was full of migrants. I shot a female *Erythrosterna mugimaki* (T. & S.),

two females of *Pericrocotus cantonensis*, and a male *P. cinereus*, also a pair of *Xanthopygia narcissina*, and a male *Caprimulgus jotaka*. I further saw several times *Cyanoptila cyanomelana*. I got also a specimen of the Tailor-bird (*Orthotomus*), which is not uncommon in Naochow island, though I sought for it in vain in Hainan. Neither does it occur in Formosa, though common enough on the Chinese coast opposite. On the 6th we made the best of our way to Hongkong, touching at Macao.

With this sketch of my cruise, I will now proceed to give a list of the birds procured and noted, with descriptions of the novelties, and such details on their habits and habitats as my short time of observation admitted of my gathering.

1. *FALCO PEREGRINUS*, Gmel.

On the 18th of February, on my way from the interior to 'Tinggan city, I saw what I believe was this Falcon on several occasions. It sat on the tops of grave-mounds. It was cold, and drizzling with rain, and I did not succeed in getting a shot at one.

2. *TINNUNCULUS ALAUDARIUS*, G. R. Gray.

Observed often and in all parts of Hainan. I procured specimens both there and in the small island of Naochow, which do not appear to differ from European examples.

3. *ACCIPITER NISUS* (Linn.).

I met only one of this species; and that was on the 20th of February, at Tai-ping-sze (Central Hainan).

4. *MICRONISUS BADIUS* (Gmel.).

On the 19th of February, at Shuy-wei-sze (Central Hainan), whilst strolling about outside a wood, I saw a small Sparrow-Hawk seated quietly on the bough of a large tree. I wounded it, and, after a long chase, managed to secure it. I did not meet with the bird again. My prize was a fine adult male, and turns out to be this species. Mr. J. H. Gurney pronounced it to be so; and I have since compared it (kindly assisted by Mr. G. R. Gray) with specimens in the British Museum. This Sparrow-Hawk has not hitherto occurred within our Chinese limits.

5. SPILORNIS RUTHERFORDI, sp. n.

On the 19th of February, as we were journeying from Shuy-wei-sze (Central Hainan), my party made a halt at a wayside house adjoining a wood. I got out of my chair and wandered among the trees. I had not gone far when out bustled an Eagle from close over my head. I brought him down, and found that I had shot an immature *Spilornis*. The country from this place to Tai-ping-sze was one succession of fine timber-woods, consisting chiefly of large liquidambar-trees, or of various species of figs. Cultivated land occurred in patches between. I had got into the home of the Spotted Snake-Eagle. The next day I saw two or three of them soaring in circles high up in the air, and uttering a squeal-like scream. Such a falsetto note from so big a bird did not seem possible. The circles they described were not of great diameter. Presently one made a sudden stoop, and alighted on the top bough of a high tree. It showed no signs of alarm as I walked deliberately under the tree and shot it. I picked up an adult bird so much smaller than the birds I had obtained before at Formosa and Amoy, that I made sure that I had got *S. bido*. I shot two more adults that day with equal ease; and at the same place, on my way back, I got a fourth adult. I did not observe the bird in any other part of Hainan. Out of the stomachs of those I procured were taken bits of snakes and grasshoppers. Their irides were bright yellow, their cere and orbits deep yellow, and their legs and toes dingy ochreous-yellow, with black claws.

Mr. J. H. Gurney, on seeing a Hainan bird, said at once that it was distinct from *S. bido*, from its showing fine bars on the breast and under parts, which the Malayan species never has. He believed he had the same species from Siam, collected by the late M. Mouhot at a place in that country called Pachebouri. He sent to Norwich for the Siamese specimen and some others; and we compared them with my series of the Hainan race, and with others in my collection from Formosa, Amoy, the Himalayas, and Java. We made out the following measurements:—

Locality.	Tarsus.	Middle-toe, without claw.	Wing.	Species.
Himalaya	4.5	2.5	20.5	<i>Spilornis cheela</i> ♀
Amoy	4	2.5	20	" " ♂
"	4.5	2.3	20.5	" " ♀
Formosa (Feb. 1866)	4	2.25	18	" " ♂
" (Jan. 1866)	4.5	2.5	19.5	" " ♀
" (immature)	4	2.5	18.7	" "
Siam	3.5	2	17.75	New species.
Hainan. No. 1	3.75	1.9	16.25	" "
" No. 2	3.75	2.3	17	" "
" No. 3	4	2.3	16.7	" "
" No. 4	4.25	2.1	16.5	" "
" No. 5 (immature)	3.75	2	16.25	" "
Penang	3.3	1.75	15	<i>Spilornis bido</i> .
Java	3.25	2	15	" "
E. Java	3.75	2	16	" "
India	3.5	1.8	15.25	" "

The present new species may be distinguished at once from *S. cheela* by its smaller size and much less robust tarsi. In colour, its variable plumage seems to follow that of the Indian species. I have not succeeded in fixing on any constant characters in this respect by which to distinguish them. With *S. bido* (Horsf.) it agrees better in size, but is easily separable by its lighter under parts being more or less distinctly barred with fine zigzag lines of brown.

I have named this species in honour of His Excellency Sir Rutherford Alcock, K.C.B., Her Majesty's Minister at Peking, through whose kind influence I was selected for the exploring expedition to Hainan.

6. PANDION HALIÆTUS (Linn.).

The Osprey was seen in many of the Hainan harbours. On the 15th of February, while being poled up the main river between Kiungchow and Ting-gan, the boatmen roused me from a doze and pointed to an Osprey hovering a long way over head. I tried a cartridge at him and brought him down. He was a male, in search for his afternoon meal.

7. ? BLAGRUS LEUCOGASTER (Gmel.).

In the Lingshuy lagoon (S.E. Hainan), while shooting Swifts, a large Sea-Eagle flew over. I was on the point of

trying my luck at him when one of my comrades on the other side of the bank first snapped a cap, and then fired an unsuccessful shot at him. The bird increased the speed of his flight, shaking himself as he went along, and we thus lost the noble fellow. I saw another on the 15th of March taking long sweeping flights round a rock off West Island (S. Hainan), but there was no getting at him. It was a light-coloured bird, and more like the *B. leucogaster* than any other Sea-Eagle I know.

8. BUTEO JAPONICUS, T. & S.

I first fell in with this bird on the island of Naochow. He was resting at noon, after a meal off *Passer montanus*, in one of the bushy trees of a small grove. My appearance disturbed him, and he flew across heavily, when I secured him. The irides were yellowish-brown, just tinged with green, the cere and legs orange-yellow. This was on the 2nd of February, and the Buzzard was probably there, as at Amoy and Hongkong, a winter visitant. I afterwards saw the species on the 11th of March at Lingsuy (S.E. Hainan) and on the 25th of March at Heongpoo (W. Hainan).

9. ? POLIORNIS POLIOGENYS (T. & S.).

At Lingmun (Central Hainan) I saw a small Buzzard-like bird, which escaped wounded over a hedge. I took it to be this species, but, as I cannot be sure, I mark it with a query. The *Poliornis* is also a migrant on the China coast, and may possibly pay winter-visits to Hainan.

10. CIRCUS SPILONOTUS, Kaup.

There were several of this Harrier squatting about a large grassy plain, on the 15th of February, near the city of Ting-gan. I could not get near enough to them to have a shot. I observed it also over the paddy-fields near the capital.

11. CIRCUS ÆRUGINOSUS (Linn.).

I saw the Marsh-Harrier about the fenny shores of Hoihow harbour (N. Hainan); and up the river, near Ting-gan city, on the 15th of February, I winged a female with the help of a cartridge.

12. *CIRCUS CYANEUS* (Linn.).

Seen on the plain at Lingsuy, between the lagoon and the city.

13. *MILVUS GOVINDA*, Sykes.

There was something in the manner and appearance of the Kite, which was abundant everywhere in Hainan, that struck me as different from the China species. I took the following note from a fresh-shot male :—" *Iris bright chestnut. Cere yellow; gape bluish-white. Bill brownish-black towards tip; inside of mouth bluish. Feet pale bluish-grey, lightly tinged with yellow; claws ink-black. Length nearly 24 inches; wing 17·8; tail 12 inches. From tip of wing to tip of tail 1 inch.*"

The Chinese bird has the iris *hazel-ochre*, and has but the slightest touch of yellow on the cere (*cf.* Ibis, 1867, p. 410). Dr. Jerdon unfortunately does not give the colour of the iris and cere in *M. govinda* of India. The Hainan Kite may be identical with the Indian bird, while the Chinese race seems to hold a place intermediate between *M. govinda* and *M. melanotis* of Japan, the specimens from Peking being larger and more affine to the latter.

14. *EPHIALTES LETTIA* (Hodgs.).

While shooting Squirrels among a clump of trees and bushes on a slope under the north wall of the capital, just before dusk, at the report of my gun out bounced a small Owl, and perched on a partly exposed bough, raising his horns to the utmost, and uttering a harsh cat-like cry, of a nature likely to alarm one at night. On shooting it, I found it to be one of the *lempiji* group of Owls with dark iris. I met no more of the species.

"♂. Bill pale yellowish horn-colour. Iris deep brown. Feet light greyish-brown. No white about the face as in *E. semitorques* (T. & S.) of Japan and China.

"Length 9·25; wing 6·2; tail 3·4; tip of wing to tip of tail ·6."

I took the above note from the fresh bird. It answers best to the *E. lettia* of Hodgson, with which Messrs. Wallace and Blyth have identified my specimen.

15. *NINOX JAPONICUS* (T. & S.).

This is the only other Owl we came across in Hainan. On the 29th March, at Haosuy (N.W. Hainan), we disturbed a pair

in a grove by the side of a village, and, after much chasing, bagged them both. On the 2nd April I roused another in some market gardens not far from the capital. The birds procured are of the Chinese race, and, I should say, were on their migration up the China coast. They had the unsettled movements of fresh arrivals, and were associated with many little wanderers that, like this species, find a summer home in more northerly latitudes.

16. *CAPRIMULGUS JOTAKA*, Temm. & Schleg.

On the 19th March, on the wild jungly shore of Nychow harbour, I observed several Goatsuckers perching about the sands. It was too dark to aim straight, and I did not succeed in securing a specimen; I was therefore unable to determine to what species they belonged. Later, however, on our homeward voyage, I came across the Japanese bird. It was on the 15th April, on the island of Naochow. The specimen shot was a male, which I disturbed just before dark from among some bushes. He was evidently a migrant bound up the China coast, and took to the banyan trees, perching lengthwise on the thick branches. In a small collection of birds made, by Dr. Anderson of the Calcutta Museum, on the western borders of the province of Yunnan, from the Burmese side, which Mr. Blandford lately showed me, was a specimen of this Nightjar. I suspect that it is to the eastern foot of the mountain ranges that divide Burmah and the Laos country from China that most of our summer birds retire during winter.

17. *CYPSELUS PACIFICUS*, Lath.

"*C. vittatus*, Jard. & Selb.," of my former lists.

On the occasion mentioned above, in Nychow harbour, I noticed a large gathering of this Swift flying overhead, and screeching before dropping to roost among the rocks. I secured a specimen.

18. *CYPSELUS SUBFURCATUS*, Blyth, J. A. S. B. xviii. p. 807.

In the flock of the species mentioned previously I recognized several of these. I also saw some at Kiung-chow city on the 1st of March, during a storm.

19. *CYPSELUS TINUS*, sp. n.

Above deep sepia-brown, with a slight deep green iridescence, rump lighter, beneath much brighter. Wing and tail brownish-black, the former with pale inner edges. Between the bill and eye a whitish spot. Bill and legs blackish-brown, with a pink tinge. Iris deep hazel.

Length about 4.5; wing 4.75; first quill attenuating to the tip, and .25 in. shorter than the second; tail 2.25, middle rectrices .875 shorter than the laterals.

The female is a trifle shorter in the wing, but is otherwise similar to the male.

This species is of the same typical form as *C. batassiensis*, Gray, of India and Burmah, but is smaller, more deeply coloured, with a shorter and narrower bill, longer wings, and less forked tail. It appears to be a good second species of the Palm-Swift type, which connects *Cypselus* with *Collocalia*.

I first noticed this little species at Tai-ping-sze (Central Hainan), where a single pair passed over my head, and I shot one. Among the cocoanut-trees, on the sand-banks of the Lingshuy lagoon (S.E. Hainan), they were common enough, and we procured several. It was the 10th of March, but there did not appear any signs of nidification. On the 18th of March at Nychow (S. Hainan) I again saw numbers of them flying backwards and forwards over a wood near the city.

20. ? *ACANTHYLIS CAUDACUTA* (Lath.).

A Chinese work on the island of Hainan, in its list of birds, mentions a large species of Swallow, "as big as a Dove"*; which

* "There are two kinds of Swallows in Hainan—the 'Yuë' [*Hirundo gutturalis*] and the 'Hoo' [*H. daurica*]. There is also a Sea-Swallow as big as a Dove, that comes each spring to nestle in the rocky cliffs, dangerous precipices with piles of spinous grasses. The natives wait till the birds' autumnal departure, and then, by means of a shovel at the end of a long pole, collect the nests for sale. They are termed 'Sea-Swallows' nests,' and are now also procured from the overhanging cliffs and inaccessible crevices of the islands of Nychow and Wanchow. They are more excellent than the 'Birds' nests' bought from foreign vessels; but, as the year's produce only consists of a few pounds, they are extremely difficult to obtain."—*Kiung-shan-Ileen Che* (An Account, Historical and Statistical, of the Kiungshan District of Hainan.)

makes its nest in the caves of certain small islands off the southerly coast of Hainan. It adds that, in autumn, when the birds desert their nests, the nests are collected and sold for food, and that epicures esteem them much more highly than those imported from the Straits of Malacca. The builders of such nests must surely be this large Spine-tailed Swift. We passed close to some of these islands, but looked in vain for the birds. They had not yet returned to their breeding-places. None of the nests were to be purchased in the various markets we visited in Hainan towns; but out of a pirate the gunboat captured, off Lingshuy, we took a parcel of rather large gelatinous nests, which possibly were collected from the neighbouring island rocks; but we could procure no satisfactory evidence to show that they were. I therefore was forced, with much reluctance, to abandon the determination of this interesting question to the next adventurer who has the good fortune to go over my ground.

21. ? *MEROPS PHILIPPENSIS*, Linn.

A friend of mine, who visited the Chunlan river in the Wen-chang district (N.E. Hainan) later in the season, on a former pirate-hunting expedition, tells me that he observed a large party of green-coloured birds, which he took to belong to a species of Parrot (!), going in and out of holes in the sand-banks of this river. The Philippine Bee-eater is the only species of this genus that has been observed in China, one specimen having been obtained out of a small number some years ago at Swatow; and I refer the Hainan bird, therefore, with a query, to this species. I did not meet with the bird myself.

22. *UPUPA CEYLONENSIS*, Reichenb. *U. nigripennis*, Gould.

In Hainan we saw not our European friend *U. epops*, which occurs in tolerable abundance, from Canton to Peking, on the China coast; but here the richer-coloured "Bird of the Le matrons," as the Chinese of the island name it—the *U. ceylonensis* of Southern India and Burmah—took its place. I found it common everywhere, as common about the orchards and gardens beneath the walls of Kiungchow as in the forests of the interior or the tangled jungles of the south. It is a tame, in-offensive bird, and as much a favourite with the Hainan

Chinese as the allied *U. epops* is an object of dislike to their Amoy brethren. When disturbed while feeding on the ground, it flies up to the nearest tree, and expands its crest, bowing each time. Its note is similar to that of the northern species, but, I think, distinguishable, being hoarser and not so sharp.

I made the following note on some specimens shot at Kiungchow:—"♂. Length 11·25; wing 5·3; tail 4·125; wing-tip to end of tail 2·25. Bill from forehead 2·4. Tertials ·25 shorter than wing-tip. Iris very deep brown. Bill deep brown for more than two-thirds of its length, pale brownish white tinged with ochre at its base. Legs greyish-brown. The female has a shorter bill than the male, and is smaller. Two females measure:—Bill 1·9 and 2·1; wing 5 and 5·25; tail 3·5 and 3·875." The proportions vary in both sexes, and the bills vary also in curvature. Four of my specimens have no white spots on the first primary; but one male has it as distinct as in *U. epops*. Hence the lack of the white wing-spot cannot be regarded as a constant distinguishing character. The absence of white at the base of the black crest-tips is a far better mark for instant discrimination. The white tail-band is very variable in breadth; and so, indeed, are all the markings. The tibial feathers are of the colour of the breast, and not whitish as in *U. epops*.

Mr. G. R. Gray was so kind as to allow me to examine the specimens of Indian Hoopoes in the British Museum. One of the skins there was a red bird like ours, with similar crest, but with the white wing-spot like my single specimen mentioned above. Another was like *U. epops* in the crest and other respects, but had no white wing-spot. This satisfactorily proves that the absence or presence of the wing-spot is no constant character in either *U. ceylonensis* or *U. epops*.

I observed no Hoopoe in the island of Naochow.

23. *ALCEDO BENGALENSIS*, Gmel.

Common in all the open country wherever water occurred.

24. *CERYLE RUDIS* (Linn.).

Seen about all the rivers and lagoons throughout Hainan.

25. HALCYON SMYRNENSIS (Linn.).

The only bird I saw of this species was at Haosuy (N.W. Hainan), in a grove adjoining a village.

26. HALCYON PILEATUS (Bodd.) ; *Alcedo atricapilla*, Gmel.

Only observed in Hainan, at the same place as the last-named. I saw three in the small island of Naochow, and procured one.

27. PALÆORNIS JAVANICA (Osbeck).

I fully expected that the "Sugar-cane-bird" of the Hainanese, the only Parrot in Hainan, would turn out to be a new species. But no, my specimens are identical with examples sent from India by Mr. Blyth. I have four fine adult birds from Hainan:—

	Length of wing.	of tail.
♂ (A.)	6.6	7
♂ (B.)	6.5	8.25
♂ (C.)	6.5	7.25
♀	6.5	7

"A" is of a deeper red on the breast than the other two males, which have a plum-coloured bloom over that part, with verditer-blue tips to the green feathers that succeed. In "B" and "C" there is more blue in the colour of the head, and on the two middle tail-feathers. In both sexes the lower mandible is black, in the female the upper as well. The red of the belly in the female skin extends less downwards, and has a chestnut wash. In the skin of another female, which I kept alive for some time, the colour of that part is light purplish, tinged with bluish-grey. In both the French-grey of the crown is of a livelier hue of blue, with less tint of purple than in the males. In my male specimen "A," which I take to be the oldest, the quills are much yellower than in the others. My two Indian birds show much more uniformity in coloration, and their pectoral red extends much lower down on to the belly. In the Hainan specimens, the variation seems to be individual, and I do not think it due to age.

Dr. Jerdon (B. Ind. i. p. 263) gives the wing of this species as 7 inches in length, and the tail 10, adding that the female acquires a red bill when fully adult. The Chinese in Hainan, who are fond of keeping this Parrakeet and teaching it to

speak, regard the black-billed and the red-billed birds as distinct. On several occasions I saw them in shops in the towns, either perched on their triangular frame-cages, to which they were chained, or walking about freely over the counter. The iris of the bird is white, its legs whitish-grey.

I cannot say that this species is common in Hainan; for I sought for it without success, and did not even see it until I got to Tai-ping-sze. Here, on my halt when journeying inwards, I noticed a small party flying at a height overhead. On my rest at the same place coming back, I suddenly came on a tolerably large number of them feeding on the wild berries of a hedge. I fired and secured two red-bills and a black-bill, which, on dissection, turned out to be males and female as I had expected. The rest were off so quick on the other side of the hedge that I did not see them again. On shore, at Haosuy harbour (N.W. Hainan), I saw the only other example of this bird. It was a male, and made such a noise talking to himself that he attracted my attention. He was sitting all alone on the bough of a tree near a village.

28. PICUS MANDARINUS, Gould.

This Woodpecker only occurred to us on the jingly shore of Yulinkan Bay (S. Hainan), which, though offering the finest harbour in the island, is entirely deserted by the Chinese. A few Le aborigines were met on shore, who brought water and cut wood for us, in exchange for some old clothes taken out of the pirate junks. The jungle on the hills, right to the beach, was, in many places, impenetrable without a knife; and many a good bird I lost from the impossibility of getting to it. Every savage here carries a large knife, in a pitcher-shaped basket fastened to the back of his waist, and with the knife he clears his way through the strong rattan and other tangles that cross the woods at every height. For a supply of cigars I induced a savage to guide me about on a ramble, but, curiously enough, he took little interest in the shooting, and was no hand at retrieving. I had at last to give him up in despair. In a plantation enclosed by a wooden stockade to keep out wild beasts, I met the Commander of the gunboat. He had knocked down a

Woodpecker, which was lying on its back screaming, and showing fight with beak and claws. It was a female, with the iris white as usual. Length of wing 5 inches, of tail 3.2. On comparing the skin with my series from China, I find no marks which I can deem constant whereby to distinguish it. It has narrower black tail-bands than a bird from Canton, and in this respect approaches a Peking bird. It has a shorter wing than the Canton and Peking birds, which agree in this particular. But a Foochow bird here steps in with longer wings than the Canton and Peking specimens, and with tail-bands intermediate in breadth, while another Foochow bird has the bands fully as broad as in the Canton bird. The white spots on the wing are also variable. Our Hainan bird is apparently fully adult; for its under parts are of a clear cream-colour, and the crimson spot on the breast is very well defined.

29. *PICUS KALEENSIS*, Swinhoe, Ibis, 1863, p. 390.

The first bird that greeted me on my first ramble, on a damp morning, at Shuy-wei-sze (Central Hainan) was a little Spark-headed Woodpecker, perched on a high withered branch, uttering the same sharp note as its Formosa and Peking relatives. I met it frequently afterwards wherever timber-trees occurred, and procured four specimens. In size and general coloration my Hainan skins agree with Formosan; but the black streaks on the breast, in three of the four, are much narrower, though in the fourth they very nearly tally with those of the Formosan bird. The spots on the wing and bands on the tail vary in size in both races. The two races are more closely allied to each other than either is to the *P. scintilliceps* of Peking.

30. *MICROPTERNUS HOLROYDI*, sp. n.

A demon-like laugh startled me as I broke into a woody glade at Tai-ping-sze (Central Hainan), and turning round I spied that the author of this noise was a Bay Woodpecker clinging low down to the trunk of a tree. In those charming woods of fine old trees, between the mountain-spurs in the heart of the island, this Woodpecker was frequently heard and seen; but nearer the coast I did not fall in with it again. Its nearest ally is *M. fokiensis*, from Foochow (China), from which

it is distinguishable by its shorter wings and tail, and by the differences about the head, throat, and neck. The dark spots on the throat are wanting, or merely indicated by light yellowish-brown edging to the dull chestnut-brown feathers, while the elongated feathers of the head and hind neck are brown, with light yellowish-brown margins. The head and neck of *M. fokiensis* are lighter, with central black markings, deep chestnut-brown in the immature bird. I have five specimens of the Hainan race, which I have compared with five of *M. fokiensis* from Foochow and Tingchow; but so variable are the birds of this group, that I would scarcely attempt to separate them, were it not for the uniform shortness of the wings and tail in the Hainan bird. Both these races are readily separable from *M. brachyurus* (Vieill.), of Sumatra, *M. badius* (Horsf.), of Malacca, *M. badius* (Temm.), of Borneo, and *M. phaeiceps* (Blyth), from Pegu, of all of which I have authentic examples, received from Prof. Schlegel and Mr. Blyth; and, from Dr. Jerdon's description (B. Ind. i. p. 294), no comparison is needed of mine with his *M. gularis* of Malabar.

♂ Length of wing 4·4, of tail 2·75.

♀ " " 4·7, " 2·8.

Irides ochreous-white. Bill deep bluish-grey, with the greater part of the lower mandible, and edge of the upper, greenish-yellow. Legs and claws slate-colour, tinged with green.

I have named this species in honour of Captain Holroyd, of H.M.'s 73rd regiment, who accompanied us on the Hainan expedition, and gave me great assistance in collecting specimens.

31. MEGALÆMA FABER, sp. n. (Plate IV. fig. 1.)

Like Formosa, Hainan has also its peculiar species of Barbet; and from the almost identical colouring of the under parts, and the similarity of build and stature in the two birds, one must necessarily come to the conclusion that the one has been derived from the other, or that both are of common lineage. From its loud peculiar call, the Hainan species has earned among the natives of the island the appellation of "Ironsmith," whence I have derived its specific name*. Among the woods of the in-

* "The 'Ironsmith,' so called because its voice sounds like hammering the metal."—*Kiung-shan-Heen Che*.

terior I often saw this bird, either singly or in small parties. It is a stupid heavy species, keeping much to the upper boughs of umbrageous trees, especially those of the fig-group, of which there are a good many kinds in Hainan. It sits silent among the leaves munching the figs, and you may be under a tree a long time without knowing that a party of Barbets are overhead, except from the constant falling of berries. On staring up into the tree, it was often difficult to make them out, on account of their resemblance in colour to the foliage. When roused, they hop clumsily from twig to twig, sometimes giving utterance to a short faint note. In flying, they hold the head with the heavy bill well up, the body and tail inclining downwards, while the wings keep on a continued fluttering, and propel the bird in a straight direction.

Under parts as in *M. nuchalis*, Gould, of Formosa—that is, with a golden throat, a blue band below it, succeeded by a vermillion spot, with the rest fine grass-green—differing, however, in having purple intermingled in the blue band. On the crown it differs entirely from that species. Frontal feathers, to past the line of the eyes, with stiff shafts, black, faintly shaded with bluish-green; occipitals broadly tipped with deep crimson, a spot of the same colour occurring on each side of the bill in front of the eye. Ear-coverts cobalt-blue, tipped with yellowish-green. Under the eye to bill black. A little cobalt-blue fringes the red of the occiput. The rest of the plumage as in *M. nuchalis*, but without the dorsal red spot. Bill rather longer and larger than in that species. Irides deep reddish-brown. Legs leaden-grey, with a green tinge.

Length about 7·75; wing 4·3; tail 2·6, of ten slightly graduated feathers.

The accompanying plate (Plate IV.) represents (fig. 1) this new bird, as well as (fig. 2) the head of the allied species from Formosa.

[To be continued.]

VI.—Notes on the Birds of the Island of St. Helena.

By JOHN CHARLES MELLISS.

THE feathered portion of the St.-Helenian fauna can scarcely be said to be so interesting from a scientific point of view as



.Keulemans lith.

M & H. Harhart sculp.

Fig.1.MEGALĒMA FABER Fig 2.M.NUCHALIS